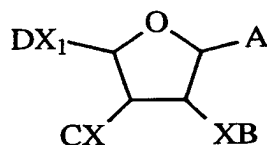
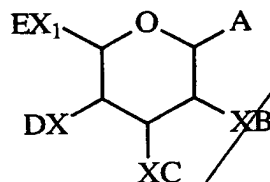


CLAIMS

1. A universal monosaccharide building block of General Formula I or General Formula II



I



II

in which

A is a leaving group;

X is hydrogen, O, N or N<sub>3</sub>;

X<sub>1</sub> is hydrogen, -CH<sub>2</sub>O-, -CH<sub>2</sub>NH-, -CH<sub>3</sub>, -CH<sub>2</sub>N<sub>3</sub> or -COO-; and

B, C, D and E are protecting groups which can be cleaved orthogonally,

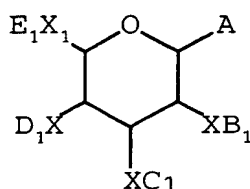
and in which

B, C, D and E are absent when X is hydrogen or N<sub>3</sub>, and E is absent when X<sub>1</sub> is hydrogen, CH<sub>3</sub> or N<sub>3</sub>.

2. A monosaccharide building block according to claim 1, in which A is selected from the group consisting of -SR; where R is alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, cycloalkyl, substituted cycloalkyl, aryl, substituted aryl, halogen; trichloroacetimidoyl-; sulphoxide; and -O-alkenyl.

3. A monosaccharide building block according to claim 1 or claim 2, which is a compound of General Formula III

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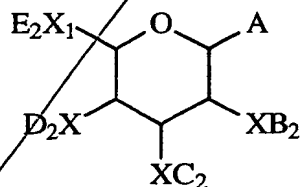


III

in which

B<sub>1</sub>, C<sub>1</sub>, D<sub>1</sub> and E<sub>1</sub> are orthogonal carbohydrate protecting groups selected from protecting group sets 1, 2, 6 and 8 as herein defined.

4. A monosaccharide building block according to claim 1 or claim 2, which is a compound of General Formula IV



IV

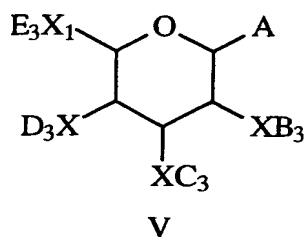
in which

B<sub>2</sub>, C<sub>2</sub>, D<sub>2</sub> and E<sub>2</sub> are selected from the members of protecting group set 1, and in themselves constitute an orthogonal set.

5. A monosaccharide building block according to claim 4, in which the members of protecting group set 1 are levanoyl, chloroacetate, *p*-methoxybenzyloxycarbonyl and 2-trimethylsilylethylcarbonate.

6. A monosaccharide building block according to claim 1 or claim 2, which is a compound of General Formula V

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in which

A, X and  $X_1$  are as defined for General Formula I  
5 and II, and

$B_3$ ,  $C_3$ ,  $D_3$  and  $E_3$  are an orthogonal set of  
protecting groups selected from amongst the members of set  
1 and from the remaining orthogonal sets.

10 7. A method of synthesis of a molecule selected from  
the group consisting of glycoconjugates of non-carbohydrate  
molecules, neo-glycoconjugates and oligosaccharides,  
comprising the step of using a monosaccharide building  
block according to any one of claims 1 to 6.

15 8. A method according to claim 7, in which the  
molecule comprises one or more compounds in which  
substituents are linked to a pyranose or furanose ring.

20 9. A method according to claim 7 or claim 8, in  
which the molecule comprises a sugar analogue.

10. A method according to any one of claims 7 to 9,  
in which the synthesis is carried out in solution.

25 11. A method according to any one of claims 7 to 9,  
in which the synthesis is carried out on a solid-phase  
support.

*Handwritten signature and initials:*  
a  
a1